REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

The specification has been amended to remove the minor error noted by the Examiner, to have portions of the description conform with the claims, and to include reference number P1' that has been added to the drawings.

Attached hereto is a proposed drawing correction to Fig. 1a wherein the reference number P1' has been added. This reference number is used to identify the cylinder coding positions, and is provided in response to the Examiner's rejection of the claims. The Examiner's approval of the proposed drawing correction is requested.

Claims 1, 2, 5, 6, 9-1 and 18 have been amended in the foregoing. In response to the Examiner's formal objections, it is noted that:

1. The reference numbers used in the claims are now enclosed in parentheses.
2. The phrase "pin rows" in claim 1 has been changed to "tumbler pin rows", as suggested by the Examiner.
3. The coding position P1 on the key has now been distinguished from the corresponding coding position P1' in the cylinder. The description at paragraph [0031] and [0038] has also been corrected, and the reference number P1' has been added to Fig. 1a.

4. Claim 1 has been amended to more clearly distinguish between the blocking groove at the tip of the key, the control surface, and the control pins. If the Examiner continues to object to the claims on these grounds, he is requested to contact the undersigned.
5. The term "safety element" has been changed to the term "security element" in claim 13.
6. The term "marked area", as used in claim 13, has been amended to conform to the original description and the drawings. The reference characters Mi, Mmi in the Figures refer to and are defining market areas and market areas on the keys, respectively. These Mi, MMI on the key are defining a segmentation, which corresponds to a segmentation in real markets.

Claims 1, 3-8, 10, 13, and 15-18 stand rejected as being anticipated by US 5,533,369 to Valdohos-Gallego (hereinafter the '369 patent). The Examiner's rejections are traversed for the following reasons.

In the present invention, the blocking groove (BN) is necessarily in a coding pin row (from the tip of the key to at least the first coding position P1). This is described in the specification and shown, for example, in Figs. 1b, 1c, 2, 9a, 12, and 17, as well as in the enclosed marked-up copy of Fig. 9a.

The blocking groove BN runs parallel to the key axis x and extends at least up to the first coding position P1. In the assigned cylinder, at least at a rearmost coding position (P1'), a pair of blocking tumbler pins corresponding to the blocking groove

(BN) is provided. The blocking tumbler pins have a blocking tumbler pin (BZ) and an extended blocking counter pin (BG). Therefore, in the assigned cylinder at least at the rearmost coding position P1', a pair of blocking tumbler pins is disposed (instead of normal coding tumbler pins) with a blocking tumbler pin BZ and an extending blocking counter pin BG. The blocking groove has a coded blocking depth B1, B2, B3 and, in correspondence with this, the length (lb) of the pair of blocking tumbler pins (BZ + BG) is coded such that the length lb corresponds to the distance db of the blocking groove BN from the cylinder housing 10. As noted in the specification, the sequence of operation is such that the blocking tumbler pin BZ is lifted at a beveled lead-in face of the key up to the level of the blocking rove BN, then with little play with the cylinder housing 10 it passes through the blocking groove BN up to the corresponding first coding position P1 where the blocking tumbler pin BZ is lowered into this first coding position with a certain coding step (here C2). In this position the pair of blocking tumbler pins BZ, BG also operate as normal coding positions of the cylinder with respect to releasing the shear line 9. If the blocking groove BN is not deep enough, such as when it has a wrong coding Bi, then the blocking counter pin BG impinges on the cylinder housing 10 and the further insertion of the key is blocked, i.e., it cannot pass through the blocking groove.

With reference to the '369 patent, it is noted that three coding pin rows, which are required by claim 1, are not provided (see Figs. 1-2 of the '369 patent). Rather, the '369 patent teaches only two coding/tumbler pin rows (a row with tumbler pins 6 and counter pins 81 and a second row with tumbler pins 7 and counter pins 91). Further, in

the structure disclosed in the '369 patent there is no place for a third coding/tumbler pin row since the required space is used for the moving elements 2, which form an additional security element which, in every aspect, is entirely different as compared to the blocking code of the presently claimed invention.

It is important to note that, in the present invention, the additional security element blocking code does note required additional space in either the key or the cylinder. Rather, in the present invention, the blocking groove BN runs in (a first part of) an existing coding pin row (e.g. in A1 or A2) and the pair of blocking tumbler pins (BN, BG) are not additional – they are at the position (P1) instead of a normal coding pin pair and also act as a coding pin.

Further, in the '369 patent there is no "blocking groove". The groove between ribs 31, cited by the Examiner, is a normal profile groove that must correspond to a profile rib (here the ribs 31) in the cylinder. Such a profile groove is well known in keys, and is shown in Figs. 1, 2, and 3 of the '369 patent. In the profile groove of the '369 patent there are no codings and no corresponding coding pin rows and clearly no pair of blocking tumbler pins. Therefore, the "groove 31" cannot be interpreted as reading on the "blocking groove" defined in claim 1.

Further, in the '369 patent there are no "pair of blocking tumbler pins", as required. The Examiner cites "any tumbler pin received between ribs 31". However, Figs. 1 and 2 clearly show that there is no tumbler pin at all received between ribs 31 (this is only a profile control) and nowhere in the '369 patent is there any indication to an extended blocking counter pin that would impinge on the cylinder housing. Rather,

all of the pins in the '369 patent are standard coding pins that do not impinge on the cylinder housing. These pins only control the shear line between stator 4 and rotor 5. "The cylinder housing 4" cited by the Examiner indicates a stator 4 of the cylinder. The cylinder housing would actually surround the stator 4, and is not even shown in the '369 patent.

Based at least on the foregoing reasons, it is respectfully submitted that claim 1, and the claims that depend therefore are not anticipated by the '369 patent. Further, insofar as claim 13 contains substantially the same language as claim 1, it is considered clear that claim 13, and the claims depending therefrom, are also allowable over the '369 patent.

With regard to the Examiner's comments on the blocking groove and the control face, it is noted that the specification and drawings clearly identifies and describes these elements of the invention. Moreover, the Examiner's contention that there is no distinction between these elements is unfounded. Clearly, the blocking groove "that runs parallel to an axis (x) of the key from a tip of the key to at least a first coding position (P1) of the coding pin row on the key" (claim 1) while a "rising control face (KF) is disposed only at the tip of the key". There is no way that the Examiner can considered the "rising control face" which is disposed only at the tip of the key to be provided by a portion of the "blocking groove" when the blocking groove is defined as being parallel to the axis and extending along the key.

Claim 2 stands rejected as being unpatentable over the '369 patent in view of US 5,687,594 to Wang. Wang is cited for teaching at least four rows of tumbler pins. It

is submitted that Wang fails to show the basic elements of the present invention. It is further submitted that the Examiner has not provided any reason or motivation in the art of record to justify the combination of Wang and the '369 patent. It is considered apparent that the present application is the only motivation for such a combination and, accordingly, the rejection is invalid for hindsight. It is further submitted, and considered apparent, that the Wang reference fails to correct the deficiencies of the base '369 patent as it relates to claim 1. For at least the forgoing reasons, the Examiner's rejection of claim 2 is overcome. Reconsideration and withdrawal of the rejection of claim 2 based upon this combination of references is requested.

Claim 3 stands rejected as being unpatentable over the '369 patent in view of US 4,325,241 to Keller. Keller is cited for teaching at least two different codings. Without regard to whether Keller teaches that for which it is cited, it is apparent that the Keller reference fails to correct the deficiencies of the base '369 patent as it relates to claim 1. For at least the forgoing reasons, the Examiner's rejection of claim 3 is overcome. Reconsideration and withdrawal of the rejection of claim 3 based upon this combination of references is requested.

Claims 10-12 and 14-18 stand rejected as being unpatentable over the '369 patent in view of US 5,438,857 to Kleinhaeny. The '857 patent is cited for teaching a rising control face and a control pin.

In the present invention, the rising control face KF is disposed only at the tip of the key and is inclined, whereas the blocking groove only runs parallel to the axis x of the key. The control face and a corresponding control pin KS with a special shape

reach below the central bisecting plane, which is not the case of normal coding pins BZ and the pair of blocking pins BZ/BG. The normal lead-in face 6 of beveled tip of a key is not part of the blocking groove – it remains unchanged. Consequently, also the functions are entirely different. The control pin prevents insertion at all if there is no correct control face KF whereas the blocking code, as explained, controls the entry though the parallel blocking groove BN with a coded blocking depth Bi.

Nevertheless, it is noted that the Kleinhaeny patent does not remove or correct the deficiencies of the base '369 patent described hereinbefore with reference to claims 1 and 13 and, therefore, even if the references were combined, the present invention defined in claims 10-12 and 14-18 (which depend from claims 1 and 13, respectively) would not result. Accordingly, claims 10-12 and 14-18 are not obvious in light of the cited art. Reconsideration and withdrawal of these rejections is requested.

Claims 19-22 stand rejected as being unpatentable over the '369 patent in view of US 6,378,739 to Maas et al. It is considered apparent that the Maas reference is completely unrelated to the claimed invention, and further apparent that one skilled in the art would not be motivated to combine the '369 patent with the Maas patent in a manner so as to arrive at the claimed invention. Reconsideration and withdrawal of the rejections based upon this combination of references is requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite

prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. FRR-12782.

Respectfully submitted,

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illustrating Fig. 9a, 10

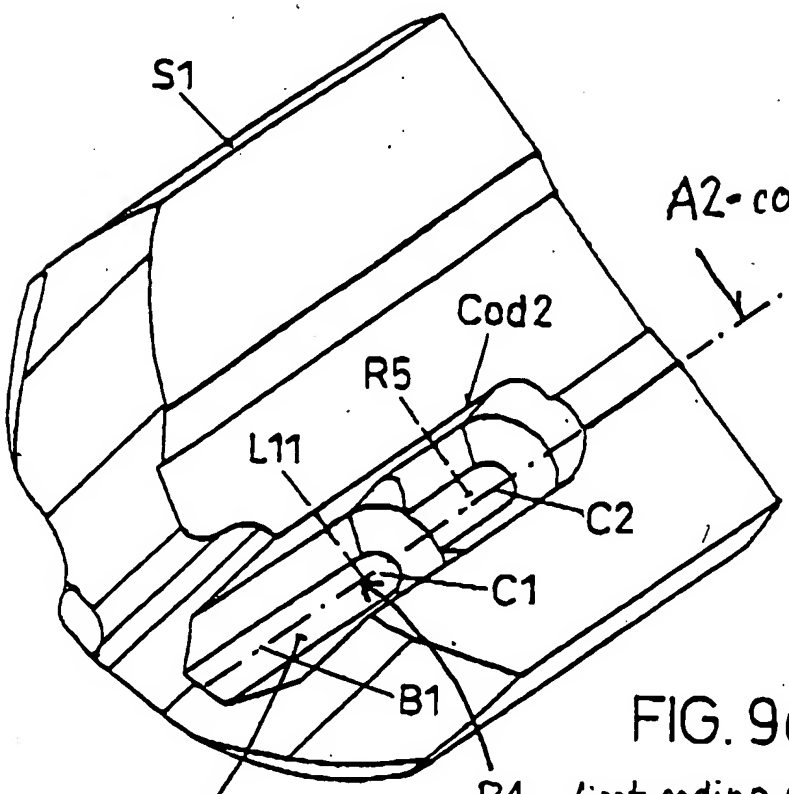

FIG. 9a

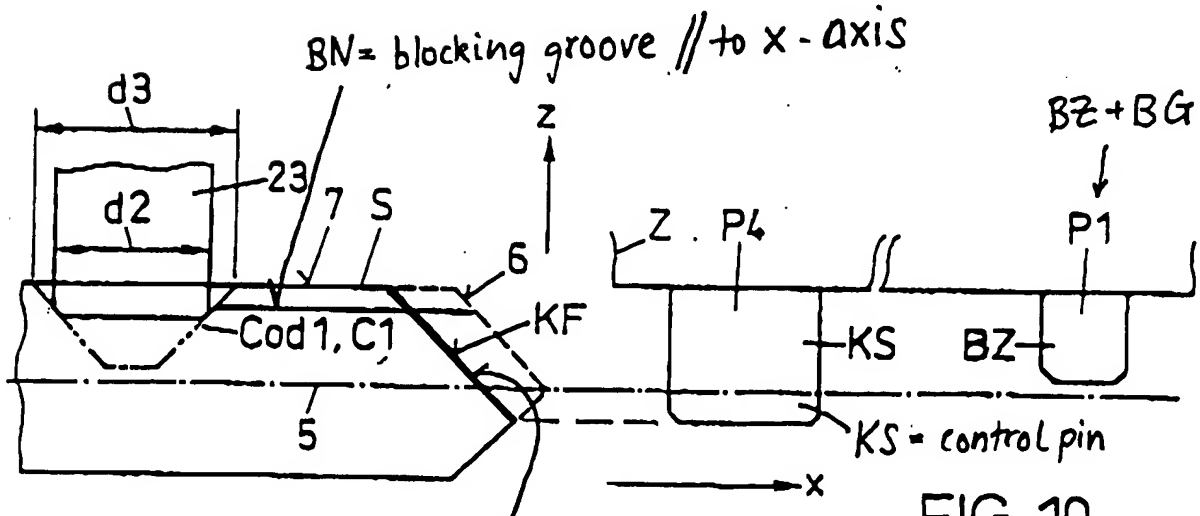

FIG. 10